1. An object (30) comprising a plurality of elongate elements (10) embedded in a matrix (20), said matrix (20) comprising a first glassy protein.

2. The object (30) according to claim 1, wherein said first glassy protein is a protein selected from the following group of proteins:
   (a) natural proteins;
   (b) recombinant proteins; and
   (c) protein analogues.

3. The object (30) according to any of the above claims said first glassy protein comprising at least 5 mol % serine.

4. The object (30) according to any of claims 1 to 3, said first glassy protein comprising at least 20 mol % serine.

5. The object (30) according to any of claims 1 to 4, said first glassy protein comprising 25 to 50 mol % serine.

6. The object (30) according to any of claims 1 or 2, wherein at least 5% of the amino acid residues of the first glassy protein are serines.

7. The object (30) according to any of claims 1 to 6, said first glassy protein having a dry glass-rubber transition temperature (T_g) greater than 70°C.

8 The object (30) according to any of claims 1 to 7, said first glassy protein having a dry glass-rubber transition temperature (T_g) greater than 85°C.

9. The object (30) according to any of claims 1 to 8, wherein at least 5% of amino acid residues of said first glassy protein are phosphorylated.

10. The object (30) according to any of claims 1 to 9, wherein molecules of said first glassy protein are glycosylated, on average, at fewer than five amino acid residues per molecule.

11. The object (30) according to any of claims 1 to 10, wherein the amino acid sequence of said first glassy protein comprises at least one domain within which one or more amino acid sequences are repeated at least once.

12. The object (30) according to claim 11, wherein said domain comprises the 8-residue amino acid sequence:

Ser Ser Asn Thr Asp Ser Asn Ser.

13. The object (30) according to any of claims 11 or 12, wherein said domain comprises the 22-residue amino acid sequence:

Ser Ser Xxx Ser Xxx Asn Xxx Xxx Val Ser
Xxx Thr Gly Ser Ser Ser Asn Thr Asp Ser
Asn Ser.

14. The object (30) according to any of claims 11 to 13, wherein said domain comprises the 37-residue amino acid sequence:

Gly Ser Ser Thr Ser Gly Gly Xxx Xxx Ser
Ser Thr Tyr Gly Tyr Ser Ser Asn Ser Arg
Asp Gly Ser Val Ser Ser Thr Gly Ser Ser
Ser Asn Thr Asp Ser Asn Ser.

15. The object (30) according to any of claims 11 to 14 wherein said domain comprises the 40-residue amino acid sequence:

Gly Ser Ser Thr Ser Gly Gly Xxx Xxx Ser
Ser Thr Tyr Gly Tyr Ser Ser Asn Ser Arg
Asp Gly Ser Val Ser Ser Thr Gly Ser Ser
Ser Asn Thr Asp Ser Asn Ser Asn Ser Xxx

16. The object (30) according to any of claims 11 to 15, wherein said amino acid sequence is repeated within said domain.

17. The object (30) according to any of claims 11 to 16, wherein said amino acid sequence is repeated at least three times within said domain.

18. The object (30) according to any of claims 11 to 17, wherein said amino acid sequence is repeated at least five times within said domain.

19. The object (30) according to any of claims 11 to 18, wherein said domain comprises a beta-sheet structure.

20. The object (30) according to any of claims 1 to 19, wherein said first glassy protein is a protein selected from the group of repetitive block proteins consisting of:
(a) sericin;
(b) *Pseudomonas seringae* ice nucleation protein INAZ;
(c) *Drosophila* putative chitin binding protein QVEL9
(d) homologues of (a), (b) and (c); and
(e) analogues of (a), (b) and (c).

21. The object (30) according to claim 20, wherein the sericin is derived from the cocoon silk of domesticated or wild silkworms.

22. The object (30) according to any one of claims 20 to 21, wherein the sericin is extracted from a wash solution.

23. The object (30) according to claim 22, wherein said matrix (20) further comprises at least one second glassy protein.

24. The object (30) according to claim 23, wherein said second glassy protein has the same amino acid sequence to said first glassy protein but differs from said first glassy protein by at least 25% in its degree of phosphorylation and/or glycosylation.

25. The object (30) according to any of claims 1 to 25, wherein said matrix (20) further comprises a polymer material.

26. The object (30) according to claim 25, wherein said polymer material is a synthetic or natural rubber.

27. The object (30) according to any of claims 1 to 26, wherein said object (30) further comprises a coating (40) that is substantially impermeable to water and water-vapour.

28. The object (30) according to claim 27, wherein said coating (40) comprises a polymer layer.

29. The object (30) according to any of claims 27 to 28, wherein said coating (40) comprises a thermoplastic.

30. The object (30) according to any one of claims 1 to 29, wherein said plurality of elongate elements (10) comprises a plurality of silk cocoons of domesticated or wild silkworms.

31. The object (30) according to any one of claims 1 to 29, wherein said plurality of elongate elements (10) comprises a plurality of layers delaminated from silk cocoons of domesticated or wild silkworms.

32. The object (30) according to any one of claims 1 to 29, wherein said plurality of elongate elements (10) comprises a plurality of filaments, threads, yarns or fibres.

33. The object (30) according to claim 32, wherein said elongate elements (10) are selected from the group of fibres consisting of:
(a) glass fibres,
(b) carbon fibres,
(d) carbon nanotubes, and
(e) montmorilonite clay particles.

34. The object (30) according to any of claims 1 to 33, wherein said plurality of elongate elements (10) comprises a synthetic, a natural polymer or mixtures thereof.

35. The object (30) according to claim 34, wherein said synthetic or natural polymer is selected from the group of polymers consisting of:
    (a) polyester polymers;
    (b) polyamide polymers;
    (c) polyvinylchloride polymers
    (d) polytetrafluoroethylene polymers; and
    (f) polyurethane polymers.

36. The object (30) according to any of claims 34 or 35, wherein said polymer comprises a polyarimide polymer.

37. The object (30) according to claim 34, wherein said synthetic or natural polymer is a polypeptide.

38. The object (30) according to claim 37, wherein said polypeptide is a fibrous protein.

39. The object (30) according to any of claims 37 or 38, wherein said polypeptide is selected from the group of:
    (a) spider silk proteins;
    (b) analogues of spider silk proteins;
    (c) silk-worm proteins;
    (d) analogues of silk-worm proteins;
    (E) regenerated silk protein;
    (f) mixtures of two or more of (a) to (e), and
    (g) fibrous proteins.

40. The object (30) according to any of claims 37 to 39, wherein said polypeptide is a recombinant polypeptide.

41. The object (30) according to any of claims 1 to 40, wherein said plurality of elongate elements (10) is substantially oriented along a longitudinal axis.

42. The object (30) according to claims 1 to 41 wherein the plurality of elongate elements (10) is wound, combed, embroidered or woven.

43. A laminate (50) comprising a plurality of the object (30) according to any of claims 1 to 42, wherein said plurality of the object (30) forms a plurality of sheets (55).

44. The laminate according to claim 43 wherein said plurality of sheets (55) is laminated together by said matrix (20).

45. The laminate according to any of claims 43 or 44 comprising a further adhesive material (60).

46. The laminate according to claim 45 wherein said further adhesive material (60) is a synthetic or natural rubber.

47. A method of manufacturing an object (30) comprising the steps of:
(a) preparing, in an aqueous solvent and at a concentration of at least 20 wt %, a solution of a protein capable of forming a glassy state;
(b) contacting a plurality of elongate elements (10) with said solution so that said elongate elements are substantially wetted by said solution;
(c) substantially filling interstices between said elongate elements with said solution; and
(d) rapidly drying the product of step (c);
wherein said object (30) comprises elongate elements (10) embedded in a matrix (20) formed by said solution on drying and comprising a glassy protein.

48. The method according to claim 48 wherein step (a) comprises:
(a) preparing said solution by dissolving substantially purified sericin in an aqueous solvent to a concentration of at least 20 wt %.

49. The method according to any of claims 47 or 48, wherein step (c) is performed by exerting pressure upon said solution in the presence of said elongate elements (10).

50. The method according to any of claims 47 to 49, wherein step (c) is performed by passage through at least one set of compression rollers (70).

51. The method according to any of claims 47 to 49, wherein step (c) is performed by vacuum infiltration.

52. The method according to any of claims 47 to 51, wherein step (d) is performed by a method selected from the following group of methods:
    (a) methods of vacuum drying;
    (b) methods of drying to equilibrium over phosphorous pentoxide;
    (c) drying in a flow of dry gas; and
    (d) drying in a flow of heated gas.

53. The method according to any of claims 47 to 52 comprising an additional step prior to step (d), wherein said additional step comprises shaping said plurality of elongate elements (10) over the surface of a mould.

54. The method according to any of claims 47 to 53 comprising an additional step (e) that follows step (d), wherein said additional step comprises:
    (e) applying a coating (40) that is substantially impermeable to water and water-vapour.

55. The method according to claim 54 wherein said coating (40) comprises a polymer layer.

56. The method according to any of claims 54 or 55, wherein said coating (40) comprises a thermoplastic.

57. The method according to any of claims 47 to 56, wherein at least 5% of the amino acid residues of the glassy protein are serines.

58. The method according to any of claims 47 to 57, further comprising a step of treating said solution of the protein capable of forming a glassy state with a solution containing silicate ions.

59. The method according to any of claims 47 to 58, further comprising a step of treating said solution of the protein capable of forming a glassy state with a solution containing calcium ions.

60. A method of manufacturing a laminate (55) comprising the steps of:
(a) preparing, in an aqueous solvent and at a concentration of at least 20 wt %, a solution of a protein capable of forming a glassy state;
(b) preparing a plurality of layers of substantially planar sheets (55), said substantially planar sheets (55) comprising a plurality of elongate elements (10);
(c) contacting said substantially planar sheets (55) with said solution so that said elongate elements are substantially wetted by said solution;
(d) substantially filling interstices between said elongate elements (10) and interstices between the sheets of said plurality of substantially planar sheets (55) with said solution; and
(e) rapidly drying said substantially planar sheets (55).

61. The method according to claim 60 wherein step (a) comprises:
(a) preparing said solution by dissolving substantially purified sericin in an aqueous solvent to a concentration of at least 20 wt %;

62. The method according to any of claims 60 or 61, wherein step (c) is performed prior to step (b).

63. The method according to any of claims 60 to 62, wherein step (d) is performed by vacuum infiltration.

64. The method according to any of claims 60 to 62, wherein step (d) is performed by the application of pressure to said solution in the presence of said plurality of substantially planar sheets (55).

65. The method according to any of claims 60 to 64, wherein step (e) is performed during the application of pressure to said plurality of layers, thereby compressing together said substantially planar sheets (55).

66. The method according to any of claims 64 or 65, wherein said application of pressure comprises passage through at least one set of compression rollers (70).

67. The method according to any of claims 60 to 66, wherein step (e) is performed by a method selected from the following group of methods:
(a) methods of vacuum drying;
(b) methods of drying *to equilibrium* over phosphorous pentoxide; and
(c) drying in a flow of dry gas; and
(d) drying in a flow of heated gas.

68. The method according to any of claims 60 to 67 wherein at step (e) said laminate is generated as a continuous product in a format selected from the group of formats consisting of a sheet, a ribbon, or a tube.

69. The method according to any of claims 60 to 67 comprising an additional step prior to step (e), wherein said additional step comprises shaping said plurality of elongate elements (10) over a surface of a mould.

70. The method according to any of claims 60 to 69 comprising an additional step (f) that follows step (e), wherein said additional step comprises:
(f) applying a coating that is substantially impermeable to water and water-vapour.

71. The method according to claim 70 wherein said coating comprises a polymer layer (40).

72. The method according to any of claims 70 or 71, wherein said coating (40) comprises a thermoplastic.

73. A use of the object (30) according to any of claims 1 to 42 for the manufacture of a medical product.

74. The use of the object (30) according to claim 73 for the manufacture of a wound dressing.

75. The use of the object (30) according to claim 73 for the manufacture of a medical implant.

76. The use of the object (30) according to claim 73 for the manufacture of a medical prosthesis.

77. The use of the object (30) according to any one of claims 1 to 42 for use in ballistic protection.

78. The use of the object (30) according to any one of claims 1 to 42 for the manufacture of a laminate (50).